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February, 1997

1 AFFIDAVIT OF ROBERT C. DAUFFENBACH

2
3 I. BACKGROUND AND PURPOSE

4
5 Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

6
7 A. My name is Robert C. Dauffenbach. My business address is the Center
8 for Economic and Management Research, College of Business
9 Administration, University of Oklahoma, Norman, Oklahoma, 73019.

10
11 Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION
12 WITH YOUR EMPLOYER?

13
14 A. I am employed by the University of Oklahoma as Director of the Center for
15 Economic and Management Research and as Professor of Management.
16 I also hold the title of Professor of Economics.

17
18 Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL
19 BACKGROUND?

20
21 A. I received my B.A. and M.A. degrees in economics from Wichita State
22 University and my Ph.D. in economics from the University of Illinois at
23 Urbana-Champaign in 1973. I have served on the faculties of Wayne
24 State University and the University of Illinois prior to coming to Oklahoma.
25 I joined the faculty at Oklahoma State University in 1977 and served as
26 Director, Office of Business and Economic Research, 1985-1990. In the

1 fall of 1990 I assumed duties as Director, Center for Economic and
2 Management Research, University of Oklahoma.

3
4 Q. WHAT IS THE CENTER FOR ECONOMIC AND MANAGEMENT
5 RESEARCH AT THE UNIVERSITY OF OKLAHOMA?

6
7 A. The Center for Economic and Management Research (CEMR) has almost
8 a 70 year history of serving the people of the State of Oklahoma by
9 engaging in economic analysis, policy review, and primary and secondary
10 data collection activities related to the state's economy. It publishes the
11 monthly *Oklahoma Business Bulletin* and annually the *Statistical Abstract*
12 *of Oklahoma*. We compute leading indicators of the state's economy, a
13 General Business Index for the state and the major metro areas, and
14 forecasts. CEMR is a storehouse of information on the Oklahoma
15 economy. Staff of CEMR have made numerous and significant
16 contributions to public policy research in Oklahoma. The ORIGINS on-line
17 economic development data base system is operated through CEMR.

18
19 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

20
21 A. I have been asked to review the economic impact study prepared by
22 WEFA that estimates the economic benefits to Oklahoma from
23 Southwestern Bell's immediate entry into the long distance market in this
24 state. I am prepared to provide the Commission with my views on the
25 conclusions reached by this study and the procedures by which the
26 conclusions were drawn.

1 II. ASSESSMENT OF WEFA'S CONCLUSIONS

2
3 Q. WHAT ARE THE CONCLUSIONS OF THE WEFA REPORT?

4
5 A. WEFA evaluates the impacts of open competition in long-distance service
6 on the Oklahoma economy by comparing a baseline forecast with a
7 simulation that processes reduced long-distance service costs. The
8 differentials in the two forecasts then represent the impacts of
9 Southwestern Bell's entry and resulting increase in long-distance service
10 competition. The WEFA results indicate that by the year 2006
11 employment will rise by an additional 10,252 jobs above the baseline
12 forecast. Gross State Product, adjusted for inflation, expands by an
13 additional \$712 million above the baseline forecast.

14
15 Q. IS THE METHODOLOGY SOUND AND DOES THE STUDY
16 ADEQUATELY ADDRESS SPECIAL OKLAHOMA CONDITIONS?

17
18 A. I find the system whereby WEFA provides estimates of the economic
19 impacts of freeing competition in the long distance market to be quite
20 elaborate, complete, and impressive. Their system begins with an input-
21 output framework that takes into account relative prices and is capable of
22 factoring in alternative pricing regimes and working out the resulting
23 pricing structures among product groups. Productivity growth and quality
24 are also components of the Industry Analysis segment of the model. The
25 input-output results are then aligned with the US Macroeconomic Analysis
26 model and forecasts are generated and compared with baseline
27 assumptions.

1

2 It is especially impressive that their regional economic modeling system is
3 able to provide estimated impacts for regions of a specified state. WEFA
4 makes a point of saying that their regional economic system is designed to
5 pick up the nuances of differential reactions to business cycles among the
6 several states and why states grow or decline relative to each other over
7 the longer run. Each state is modeled individually, as they note, and
8 different modeling structures are specified since the underlying
9 characteristics of the various states differ. Comparative advantages of
10 one state over the other are also modeled.

11

12 Q. HOW DOES THE STUDY REACH ITS CONCLUSIONS OF BENEFITS
13 TO THE STATE OF OKLAHOMA?

14

15 A. The WEFA report does a good job in its report of laying out the base of
16 assumptions that are needed to analyze the impacts of greater
17 competition and lower costs of long-distance services. I believe that they
18 identify many of the important factors that should be considered in an
19 analysis such as this. I especially enjoyed reading the sections of the
20 report on the importance of information and the communications industry,
21 which explains the important trends in usage of telecommunications
22 services by industry, and why the rates of growth are so high.
23 Assumptions regarding long distance prices, telework and labor force
24 participation are carefully spelled out. In the modeling, WEFA then
25 analyzes the impacts on productivity in the use of information services.
26 They also factor in a growth curve for the Internet.

27

1 I am impressed, indeed, with the extent and robustness of the modeling
2 frameworks that are utilized in simulating the impacts of a change in
3 telecommunications prices, or, for that matter, the myriad of simulation
4 activities that could be undertaken with this system. I have no difficulty at
5 all in saying so publicly. This is a very complete and competent structure
6 for analyzing the question at hand by a firm with an international
7 reputation.

8
9 Q. ARE THERE ANY ASPECTS OF THE ASSUMPTIONS OR FINDINGS
10 OF THE WEFA STUDY THAT APPEAR UNDERSTATED?

11
12 A. To some extent, yes. For whatever reason, WEFA seems to be assuming
13 that the problems that plagued the Oklahoma economy in the 1980s
14 remain with us today and will forever hold the economy down. I suggest
15 that quite the opposite is true. The Oklahoma economy has recovered
16 fully from the energy-bust that hit the economy in 1982 and again in 1986.
17 I include a graphic reporting year-over-year employment gains in the state
18 and contrasting these with gains in the US. The energy crisis is clearly
19 shown on this graphic as a period in which the state did less well than the
20 nation in employment growth, even slipping deeply into negative territory
21 at times. It is also apparent that there are other times, including most
22 recently, when the Oklahoma economy has done much better than the
23 nation in employment growth. This period extended roughly from 1970
24 through mid-1982. In additional, the 1990-91 recession had little impact
25 on the state.

1 A second figure shows national and Oklahoma employment graphed as
2 levels. Here the axes are controlled to pictorially display a least-squares
3 fit of Oklahoma as a function of national employment. This simple
4 regression yields a slope coefficient of 0.0113, indicating that an additional
5 one million jobs nationally implies a growth in Oklahoma jobs of 11,300.
6 The double-log regression yields an elasticity of 1.043, showing that
7 Oklahoma jobs rise about in proportion with that national economy over
8 the long-run. But, in recent times, say 1987 to present, the elasticity has
9 been even higher, at 1.28. Some might argue that that period is too
10 associated with the recovery of the Oklahoma economy. But even the
11 1989 to present regression yields a high elasticity of 1.23. Thus, for every
12 ten percent gain in jobs nationally, Oklahoma has recently gained 12.3
13 percent. Over the long pull, if one takes the entire 1967 to present growth
14 in nonagricultural employment into account, the US had grown by 82
15 percent while Oklahoma has expanded by 93 percent. Over the long run
16 we are doing quite well, and expect to do so in the future, at least in the
17 employment category.

18
19 Indeed, if there is one area that has been an obvious growth vehicle for
20 the Oklahoma economy, it is the telecommunications area. The state
21 benefits from Hertz and Avis reservations centers, from a recently installed
22 and expanding Southwest Airlines reservation center, and from America
23 On-Line, a new arrival in town utilizing telecommunications. ITI, Inc., a
24 telemarketing concern, also has a strong foothold in the state. The mere
25 presence of such large scale entities in the state signifies a comparative
26 advantage for Oklahoma in this activity, from which we might even reap a
27 higher benefit with falling prices.

1 If anything, I think that WEFA has underestimated the impact of
2 Southwestern Bell's entry and free competition, and falling
3 telecommunications prices on a state such as Oklahoma.
4

5 Q. WILL THE PUBLIC BENEFIT FROM IMMEDIATE COMPETITION IN
6 LONG DISTANCE SERVICES?
7

8 A. The public as a whole always benefits from increased competition,
9 although specific groups may at times be harmed. Generally, long-
10 distance tariffs have been held somewhat high by regulatory bodies in
11 order to generate funds to subsidize basic service to some households
12 who could, otherwise, not afford the service. This is an issue that will
13 have to be dealt with, but there is tremendous underlying potential for the
14 Oklahoma economy in inducing competition in this arena. By being early
15 out of the gate, Oklahoma has a tremendous opportunity to capture more
16 telecommunications business and to reap productivity advantages. We
17 can have a more domestically and internationally competitive economy by
18 allowing unrestricted competition in our long distance markets, and
19 specifically, by allowing Southwestern Bell to enter this market. With a
20 more competitive state economy, it is hard to imagine any group or area of
21 the state that will not benefit.
22

23 III. SUMMARY

24

25 Q. CAN YOU SUMMARIZE YOUR CONCLUSIONS ABOUT THE WEFA
26 STUDY?
27

1 A. The WEFA study uses a consistent and robust set of models to examine
2 the impacts on the Oklahoma economy of adopting immediate competition
3 in long distance services. The modeling framework builds from the top-
4 down of the US economy to state-level impacts. Thorough knowledge of
5 the telecommunications industry is exhibited in their study and the base of
6 assumptions and mechanisms for increased growth are examined
7 carefully.

8
9 The estimated impacts for the Oklahoma economy are, I believe,
10 conservative, possibly quite conservative. Simply put, I disagree with
11 WEFA about the long-term growth potential of the Oklahoma economy.
12 Recent growth trends and long-term evidence, I would argue, supports my
13 view. This gives rise to some differences. But, the potential for additional
14 differences also comes about because I am not sure that WEFA has
15 adequately accounted for the telecommunications intensity of the
16 Oklahoma economy. We have comparative advantages, it would appear,
17 in this arena. Lower costs could further extend these advantages.

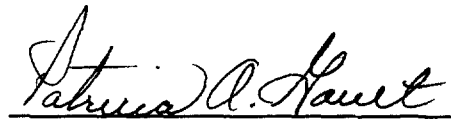
18
19 WEFA provides us with an internally consistent set of impact estimates.
20 That is the advantage of use of their system. To that system, it would
21 seem possible to attach some special features of the regional area that
22 are difficult to impose in a national modeling system. The special features
23 of Oklahoma would, in my view, positively add to the impacts that the
24 WEFA models have generated.

25



Robert C. Dauffenbach

Subscribed and sworn to before me this 8 day of April 1997.



Notary Public

My commission expires: May 24, 1997.

1
2 AFFIDAVIT OF EDWARD O. PRICE, III
3

4 I. BACKGROUND AND PURPOSE
5

6 Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?
7

8 A. My name is Edward O. Price, III. My business address is the Department of Economics
9 and Legal Studies in Business, Oklahoma State University, Stillwater, Oklahoma, 74078-
10 0555.
11

12 Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION WITH YOUR
13 EMPLOYER?
14

15 A. I am employed at Oklahoma State University as an Associate Professor of Economics.
16

17 Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?
18

19 A. I have two degrees in economics from Texas A&M University. I completed my Bachelor
20 of Arts degree, with a business minor, in 1974. I completed my Ph.D. in 1980 with areas
21 of specialization in economic theory, the history of economic thought, industrial
22 organization, public economics, and finance. I joined the economics faculty at Oklahoma
23 State University in the fall of 1979 as an Assistant Professor of Economics. I have been
24 employed at OSU for 17 years, having been promoted to the rank of Associate Professor
25 in 1984.
26

1 Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

2

3 A. I have been asked to review the report prepared by the WEFA group which summarizes
4 their analysis of the economic impact of Southwestern Bell's entry into the market for
5 long distance telephone services in Oklahoma. I have also been asked to evaluate the
6 conclusions reached in this study and to be prepared to present my opinions to regulatory
7 commissions.

8

9 II. ASSESSMENT OF WEFA'S CONCLUSIONS

10

11 Q. WHAT ARE THE CONCLUSIONS OF THE WEFA STUDY?

12

13 A. The WEFA Group concludes that the economic impact of Southwestern Bell's entry into
14 long distance telephone markets in Oklahoma will include 10,250 new jobs and an
15 additional \$712 million in real Gross State Product (the inflation-adjusted, dollar-value of
16 production in the state economy) by the year 2006. The study finds that the policy
17 change increases the ten-year rate of growth in employment from 13.5 percent to 14.2
18 percent and increases the ten-year rate of growth in real Gross State Product from 18.3
19 percent to 19.4 percent.

20

21 The WEFA study also estimates the economic impact of the policy change by industry
22 and by geographic area. Since the projected changes are initiated through the
23 telecommunications industry, those industries and areas that are disproportionately
24 dependent on telecommunications will receive disproportionate shares of the benefits.
25 Thus, the manufacturing and service sectors of the Oklahoma economy will account for

26

1 approximately 66 percent of the new jobs and approximately 63 percent of the increase in
2 real Gross State Product. Currently, these two sectors account for roughly 40 percent of
3 state employment and 33 percent of real Gross State Product.

4
5 The geographic impact of the policy changes is similarly disproportionate. While the
6 Oklahoma City and Tulsa Metropolitan Statistical Areas represent 63 percent of state
7 employment, these two areas are forecast to gain approximately 93 percent of the new
8 jobs. These two urban areas will also account for 87 percent of the growth in real Gross
9 State Product even though their current share of real Gross State Product is 62 percent.

10
11 While the economic impact of Southwestern Bell's entry into long distance markets in
12 Oklahoma are concentrated in the manufacturing and service sectors and in the Oklahoma
13 City and Tulsa areas, the other sectors of the economy and areas of the state will benefit.
14 The WEFA study projects some employment gain in every sector and every area of the
15 state. Similarly, every sector and area can expect to see some gain in real Gross State
16 Product.

17
18 Q. HOW DID THE WEFA GROUP ANALYZE THE ECONOMIC IMPACT OF
19 SOUTHWESTERN BELL'S ENTRY INTO LONG DISTANCE MARKETS IN
20 OKLAHOMA?

21
22 A. The WEFA Group estimates the economic impact of Southwestern Bell's entry into long
23 distance markets in Oklahoma by comparing two forecasts of the Oklahoma economy.
24 The "baseline" projection estimates economic conditions in Oklahoma for the year 2006
25 based on current economic circumstances. The "long distance simulation" projection
26

1 estimates the state of the Oklahoma economy in 2006 based on the expected economic
2 effects of the requested change in the telecommunications market. The differences
3 between these two projections are the economic impact of Southwestern Bell's entry into
4 the market for long distance telephone services in Oklahoma.

5
6 The baseline and simulation forecasts are derived from a statistical model of the
7 Oklahoma economy. This statistical model attempts to capture those characteristics that
8 are unique to the Oklahoma economy. This is accomplished by incorporating the
9 fundamental structure of Oklahoma industry, including the mix of industries that are
10 specific to Oklahoma. The statistical model also incorporates the impact of changes in
11 the national economy on the Oklahoma economy.

12
13 Q. IS THE METHOD USED BY THE WEFA GROUP APPROPRIATE?

14
15 A. The WEFA Group's study is consistent with standard economic practice and methods
16 with respect to macroeconomic forecasting. The method is similar to that employed in
17 the Oklahoma State Econometric Model which is used in the preparation of the annual
18 *Oklahoma Economic Outlook* published by the College of Business Administration at
19 Oklahoma State University. From the description of their statistical methods, the
20 methodology employed by WEFA is as sophisticated as I have encountered.

21
22 My only concern with the model is that it probably does not capture all of the economic
23 consequences of recent changes in the Oklahoma economy. Oklahoma has experienced
24 some important changes in its telecommunications industry and industries that are
25 strongly tied to telecommunications. Examples include the acquisition of WilTel by
26

1 WorldCom/LDDS and the announcement by Southwest Airlines of plans to locate a
2 reservations center in Oklahoma. These are but the latest developments in Oklahoma's
3 efforts to diversify its economy. While many of these developments have not had time to
4 impact the statistical record, it is my opinion that the Oklahoma economy will be even
5 more responsive to the economic effects of Southwestern Bell's participation in the long
6 distance telephone services market than predicted by the WEFA Group's study.

7
8 Q. WHAT ARE THESE ECONOMIC EFFECTS OF INCREASED COMPETITION USED
9 IN THE WEFA STUDY?

10
11 A. The economic gain to Oklahoma predicted by the WEFA Group's study are generated by
12 three economic effects of increased long distance competition. The first consequence of
13 competition is a decrease in prices in the long distance services market and in the
14 telecommunications industry as a whole. These lower prices will stimulate economic
15 activity in the telecommunications industry and in industries that depend heavily on
16 telecommunications services. The increased economic activity in these sectors will
17 stimulate business in the other sectors of the Oklahoma economy.

18
19 The second economic effect of allowing Southwestern Bell to compete for long distance
20 services will be enhancements in the quality of telecommunications services. These
21 quality enhancements will increase productivity in the telecommunications industry and
22 telecommunications-dependent industries, which, in turn, stimulates economic activity in
23 these two sectors of the Oklahoma economy. This increased activity will spillover into
24 the rest of the state economy and stimulate additional economic activity.

1 The third economic effect of Southwestern Bell's entry is an indirect effect of the other
2 two effects. Lower telecommunications prices and new and higher quality
3 telecommunications services will have the side-effect of increasing the labor-force
4 participation rate. Lower prices and improved telecommunications services will make
5 telework and telecommuting a more viable alternative to the traditional workplace
6 environment. These new employment opportunities will induce entry into the workforce
7 by some who otherwise would not have participated in the labor force. This increased
8 utilization of the population of Oklahoma will have yet another stimulative effect on the
9 Oklahoma economy.

10
11 While each of these effects will have a positive impact on the Oklahoma economy, the
12 magnitude of this impact depends on the magnitudes of the aforementioned economic
13 effects of Southwestern Bell's entry into long distance services in Oklahoma. The
14 simulation forecast from which the WEFA Group estimates the economic impact of the
15 requested policy change assumes that (1) the average price of long distance services will
16 fall by twenty-five percent over five years, (2) productivity increases will increase by two
17 percent per year over five years, and (3) the labor-force participation rate will increase by
18 one-half of one percent over the next ten years.

19
20 Q. ARE THESE ASSUMPTIONS ABOUT THE MAGNITUDES OF THE ECONOMIC
21 EFFECTS APPROPRIATE?

22
23 A. In my opinion, the assumptions used in WEFA's simulation forecast to quantify the
24 magnitude of the economic effects of the requested policy change are reasonably
25 conservative. When one considers the impact that technological change has had on prices

1 of other goods and services and the results of introducing competition into other regulated
2 markets, the WEFA Group's use of a 25 percent decrease in average long distance
3 services prices over 5 years would seem to be the minimum change that we can expect.
4 Similarly, the assumption regarding productivity gains would appear to understate what
5 we can expect. New and higher quality telecommunications products will create new
6 business opportunities and new ways of doing business in industries in which Oklahoma
7 has had some recent and significant economic development successes. The study's
8 assumed one-half of one percent increase in the labor-force participation rate over the
9 next ten years may well be the estimate that is understated to the greatest extent in the
10 WEFA study. This is due to factors that are unique to Oklahoma and to the recent
11 passage of welfare reform legislation.

12
13 Oklahoma state government has a significant investment in its own telecommunications
14 infrastructure called OneNet — the Oklahoma Network for Educational Enrichment. This
15 network was built to provide the latest telecommunications technology to approximately
16 two-thirds of the state's residents with plans to provide a wide range of services, the most
17 important of which was enhanced distance education. Various state agencies, including
18 the Oklahoma Regents for Higher Education, are exploring ways to exploit this
19 technology. One, yet unexplored opportunity, is in the ongoing efforts to reform the
20 welfare system.

21
22 The Welfare Reform Act of 1996 transfers the funding and responsibility for operating
23 the welfare system to the states and sets time limits on an individual's welfare benefits.
24 One of the economic rationales behind this policy change is to provide welfare recipients
25 with greater incentives to enter the labor force. One often expressed concern with welfare
26